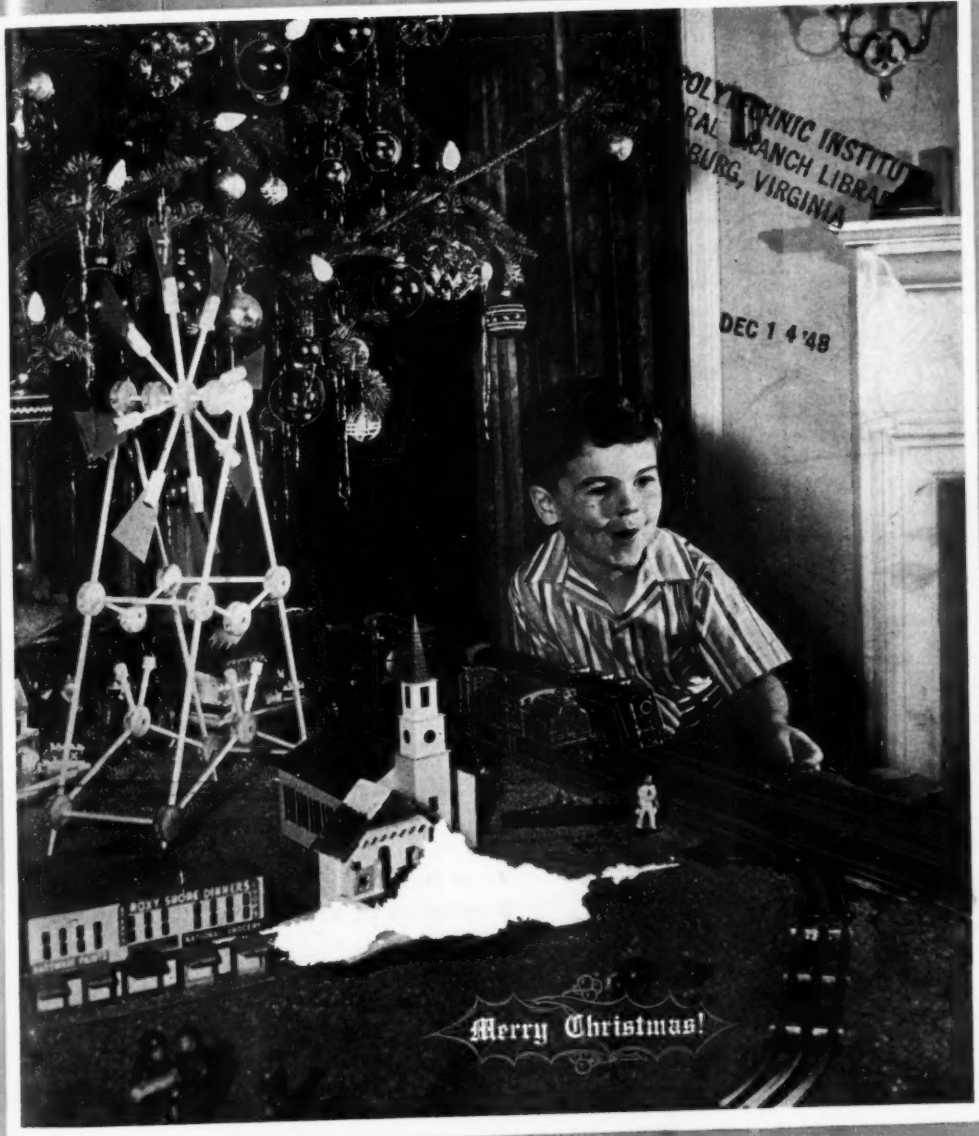
ELECTRICITY ON THE FARM *Magazine*

DECEMBER, 1948

Southern Farms "Hit the Juice"
Feed's No Grind for Linebaughs
Wisconsin Power Wood Splitter
Like These for Christmas?
Christmas in the Farm Kitchen

21st Year . . . . No. 10



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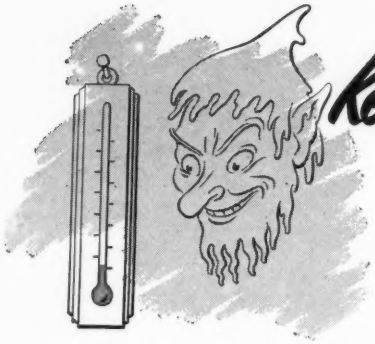

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Heating cable installed on water pipes, outer insulation spread

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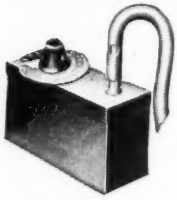
Cable in set, above left, is easy to install, triple-protected by asbestos, varnished cambric, and lead sheath



Thermostat for automatic on-off current control as needed, priced about $7.50

GENERAL ELECTRIC

669-55

Give Yourself BETTER LIVING THE YEAR 'ROUND Electrically

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Feed Grinders	Waffle Irons
Corn Shellers	Running Water
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Play Santa Claus to yourself this Christmas. Instead of spending your hard-earned money for "knick-knacks" and "doo-dads", buy the electrical appliances you need and enjoy better living the year around. Give yourself convenience, comfort and more time for the things you really want to do. For lasting satisfaction and enjoyment, there are no finer gifts "to the family from the family" than time-saving, work-saving, money-saving electrical appliances.

We are sending you this magazine so that you may know the many advantages your electric service provides.

The Montana Power Company

Editor's Chat

GREETINGS!

From our house to your house come sincere wishes for joy at the holiday season. May Peace and Good Will abide with you and in our land throughout the year.

FARM ECONOMICS

We make no claim to being an expert economist. We do, however, have reports and figures which compel one's interest.

The price of land in a number of states has now reached those same ice-clad peaks it reached after the First World War. They glitter but are hazardous. Those who bought on credit may have a slippery, stormy time.

The Doane Agricultural Digest says: "The outlook for 1949 is good for EFFICIENT farmers. . . . . It is especially good for dairymen and farmers producing hogs, beef-cattle, dairy products and poultry."

Feed is plentiful and prices are dropping. The demand for meat, poultry and dairy products is still strong. Wages are up, so city buyers are in the markets.

The European market is dropping off. Our agriculture will undoubtedly have to readjust for this. There was a drop of a little over 3 per cent in agricultural prices in two months ending Sept. 15. It has been continuing.

Government price supports on corn, wheat, cotton, rice, tobacco, peanuts and wool will be in effect until June 30, 1950. On all other supported products until Jan. 1, 1950. The support on most crops remains as it was at 90 per cent of parity.

Appending this little summary, we would like to repeat what we have said many times before. Whether you operate on a large or small scale, success will depend on the efficiency at which you operate. Most factory managers know that. It applies equally to farms. When the going gets tough, the efficient operator will still be going—and probably smiling. The inefficient operator may have more acres but less profit.

While the money is coming in is a pretty good time to be getting the farm set up for efficient operation. Let someone else buy the extra acres when prices are high.

FOOT IN THE AIR

On the escalator ahead of me was a little Japanese boy and his dad. The boy was perhaps five. He had on an American long-pants suit. He was a keen looking little chap and cute as the dickens. Several steps from the top he raised one foot in the air, ready to hop. Hop he did, and away he scampered through Penn Station with his dad. I couldn't help standing and watching. Bright, alert, happy youngster! Little fellows like him will be grown up and running this old world before long. It makes no difference whether they come from Japan, Germany, Russia or America. It does make a lot of difference here in America what those youngsters learn when they are small. The education and indoctrination we provide will shape the pattern of the future. That is a serious obligation.

We are not doing too good a job in our schools of teaching children to love our country and to understand the institutions and freedoms that have made it great. It is not sufficient to teach the mere mechanics of government and the history of wars and presidential successions. What makes people from other lands dream about coming to this country to live—those are the things our children should know about and prize. They "have a foot in the air."

FOR THE GOOD OF AMERICA

Again we have a Democratic President and a Democratic Senate and House. They were the choice of the people. Such a team should work in legislative harmony. Back of it all is *us*. Legislative bodies and executive departments try fundamentally to give the electorate what it wants. A part of the success of government, therefore, depends on you and me. If we want to maintain the kind of government that the makes the United States a good place to be, it is up to us to think and act first for the welfare of *all* the people. Pressure groups and private interests, though important, should be secondary.

Geo. W. Kable

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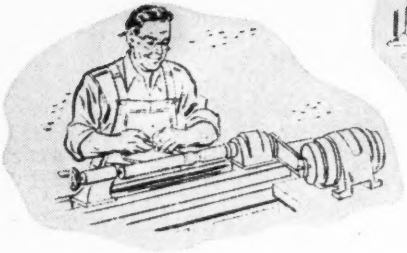
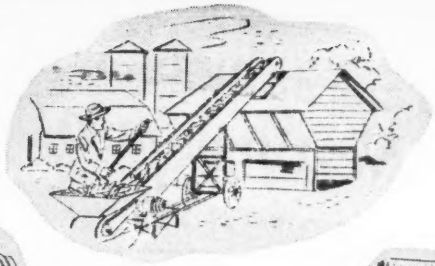
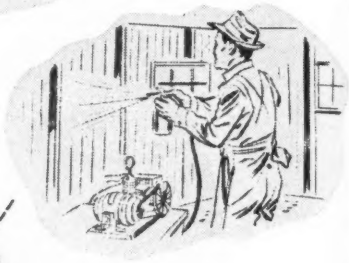
TUNE IN TED MALONE . . . EVERY MORNING, MONDAY THROUGH FRIDAY . . . ABC NETWORK

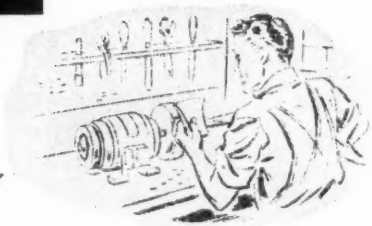


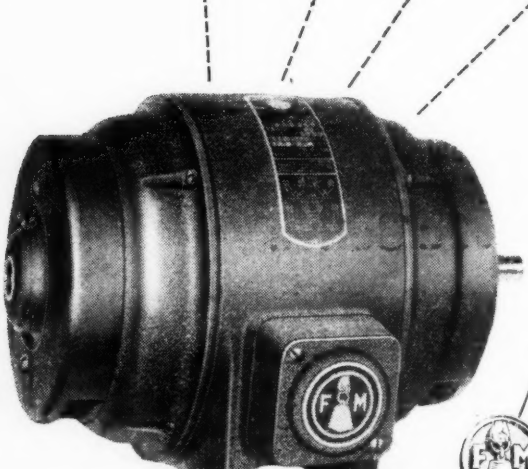




HELP AT HAND . . . NOW!

Fairbanks-Morse Farm Motors





Now you can repower that grinder, sheller — your workroom tools and other equipment — with genuine Fairbanks-Morse single phase motors! These long-time farm standbys are ideal for mechanizing hand-operated equipment and/or replacing worn-out, inefficient motors. Used wherever electric power is needed on your farm. Once installed, they ask no pampering — you can forget them except for occasional re-oiling. Write for address of nearest dealer or branch office. Fairbanks, Morse & Co., Chicago 5, Illinois.

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A name worth remembering

DIESEL LOCOMOTIVES • DIESEL ENGINES • STOKERS SCALES MOTORS GENERATORS RAILROAD MOTOR CARS and STANDPIPES • PUMPS • FARM EQUIPMENT • MAGNETOS

Southern Farms "Hit the Juice"

By COMER RENFROE

MOST statistics show that southern farms have been slower in using electricity than northern farms. But statistics are changing.

The B. D. Bedell farm near Ridgeland, South Carolina, is an example of what is taking place. This is a 360 acre farm operated by Mr. Bedell and his two sons, David and Richard. There are also four *tenant houses, all of them wired for electricity.*

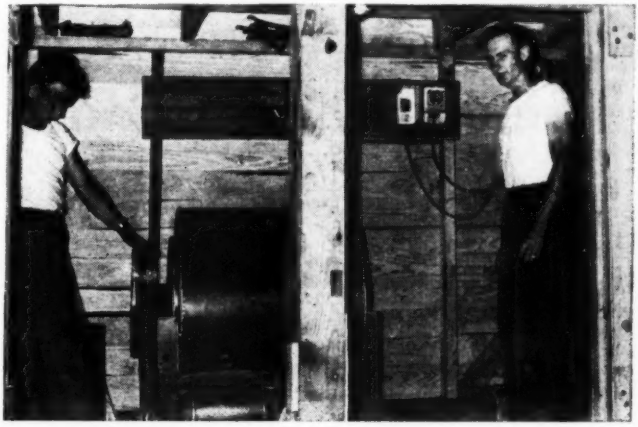
In 1947 the Bedells installed a barn hay finisher. It was designed to handle 16 tons of hay. A 3 horsepower motor driving a 12,500 cfm fan furnishes the air for the curing process. Before this finisher was installed, there was seldom any No. 1 hay and very little No. 2 hay on the Bedell farm. The heavy rain and hot sunshine just didn't produce that kind of hay in field curing. In the year the finisher was used Mr. Bedell reports approximately 80% of his hay was No. 1. Furthermore he estimates that he got about 20% more hay per acre because he saved all the leaves.

The dairy herd is being built up. Twenty cows are now being milked with an electric milker by the fast milking process. The milking is done in a small modern milking barn. The climate is such that the cows do not need to be kept housed except at milking time.

There are two automatic electric water systems on the farm, one for household use and the other for livestock. These pumps have reduced the time required for chores and household tasks about 150 hours per month. An electric water heater is used in the dairy for cleaning and for washing and sterilizing dairy equipment.

An electric brooder has also been installed for raising chicks. Mrs. Bedell reports that she is now successfully raising 90 per cent of the chicks as compared to 60 or 70 per cent she used to bring through.

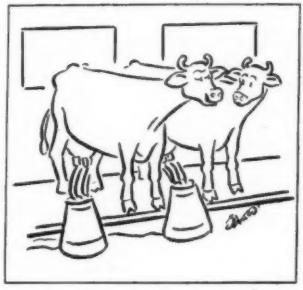
Sweet potatoes are grown extensively. The plants are produced in a 6 by 60 ft. electric hot bed. This electric cable heated bed saves about 90 per cent of the time formerly used in producing plants. It is possible to grow about 5 times as many plants per square yard of bed as formerly. The electric controls also make it possible to have some influence on the quality of the plants and the time they are ready for setting.



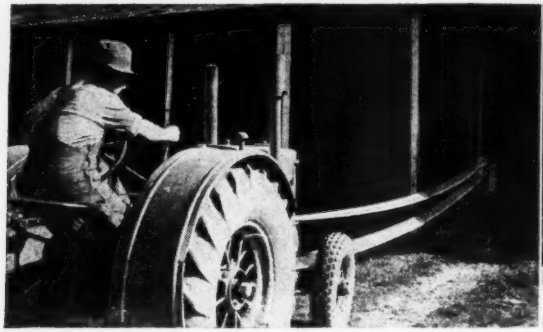
With the building up of this general farm business there has been need for a farm shop. Mr. Bedell and the two boys are building one that will be electrically equipped. Incidentally working in that shop is one of the things that makes farming interesting.

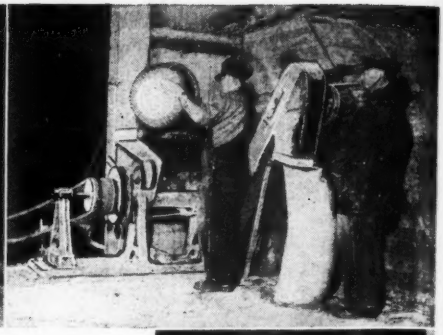
Here is another point of interest we don't want to miss. Because of the electrical equipment, Mr. Bedell points out that he has been able to release three farm hands formerly used on his farm. While his monthly power consumption averages 1236 kilowatt hours, his power bill is less than the savings he had made through the use of the service.

The Extension Service of Clemson College and the rural department of the power supplier have been "Johnny-on-the-job" in helping Mr. Bedell and other farmers with their farm electric problems.



"I'm giving them an extra quart for Christmas."





Upper Left: Starting the tractor every Saturday morning, hot or cold, and lining up to grind feed used to be the regular procedure at Linebaughs. **Upper Right:** After getting the tractor started and into the belt, the work started. Grain was carried to the mill in a basket. The ground feed was sacked and carried down stairs for storage. **Lower Right:** When the cows were to be fed, ground feed was dumped from sacks into a basket. The basket was carried to the cows, put down, feed "panned" out.

Grinding's No "Grind" for Linebaughs

By **D. E. WIANT**
Agricultural Engineer, Michigan State College

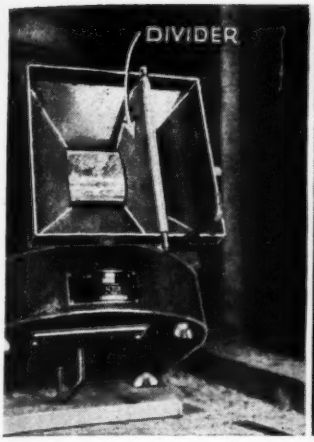
EVERY Saturday morning for some years everybody on the Linebaugh farm, near Portland, Michigan, pitched in to get the weekly "grind" over with. The next week's supply of cow feed had to be ground. It was one job that everybody dreaded. Warm up the tractor, back it into the belt, finally get the belt lined up, shovel grain into a basket, carry it to the grinder, bag the feed, carry it down the stairs. Plenty of grind on this job! Men working for the cows! At feeding time ground feed was dumped into a basket, and carried from cow to cow. Rats and mice took their toll of feed and bags. It was pull and strain, shovel and lift, carry and dump. Then do it all over again. Little wonder they hated the job.

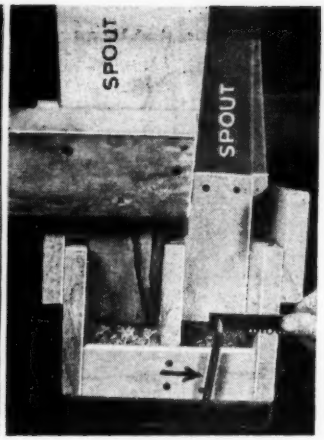
You say they might have had a more convenient arrangement. That's just it! There are thousands of farms where feed grinding and handling has just sort of grown up without any plan. Every one of those farms could save time and labor and have better feed.

Along about 1943 one of the Agricultural Engineers from Michigan State College took a one-half horsepower, electrically-operated hammer mill out to the Linebaugh farm to see what it could do. It did the grinding everyday for a week, but nobody got enthused about it. Nobody dared hope that a little one-half horsepower grinder like that could eliminate their Saturday morning drudgery. Then somebody suggested they had better use up the bagged feed that had been ground by the tractor mill. The cows refused to eat the bagged feed. They preferred freshly-ground feed.

That settled the question. The hammer mill got a try at the job. The best possible installation was determined. The grinder was mounted on a platform directly below the grain bins in the barn. Spouts, holes in the bottom of the grain bins, an

With the new system, grain is spouted down from the bins above to the mill. The ground, mixed grain is discharged directly into the feed cart, mounted on wheels. The only thing that is the same is the feed pan. It hangs on the end of the cart. When concentrate, like bonemeal, is fed, a separate container for it hangs on the edge of the feed cart. Note, there is no lifting and carrying. The mill is supported on a platform from the floor joists above.





Left: This view is looking down into the hopper of the mill. A vertical divider is placed in the hopper. It is supported rigidly on an iron bar fitted into notches in the edge of the hopper. The bottom of the divider sheet is swung from side to side by the supporting rod which is bent up and in and held in place against the spouts. The divider regulates the proportions of the mix by trial. Since this picture was taken another divider and spout have been added so three grains can be mixed and ground. **Right:** This picture shows a box which fits over the hopper of the mill. The ends of the feed spouts fit into the box. The arrow points to the divider lever which is held in position by a nail in the edge of the box.

automatic mixing device, and a cart made out of a box and a pair of lawn mower wheels completed the installation.

The man who cares for the cows does the grinding. Fifteen to twenty minutes, twice a day, supplies freshly-ground feed for each feeding. Starting and stopping the grinder requires less than a minute a day.

After the one-half horsepower mill was in operation for three years, I asked Mr. Linebaugh (who does the grinding) how they were getting along with the grinder. His reply was:

"We quit grinding a couple of years ago."

When I looked surprised and asked him why they quit grinding, he laughed and said:

"Sure, we're still grinding, grinding every day for our fourteen cows. It amounts to about 1500 bushels a year. I just push the button and never think about grinding. When you say grinding, I think of getting the tractor out and lugging grain and ground feed for an hour or two. We quit that way of doing things a couple of years ago!"

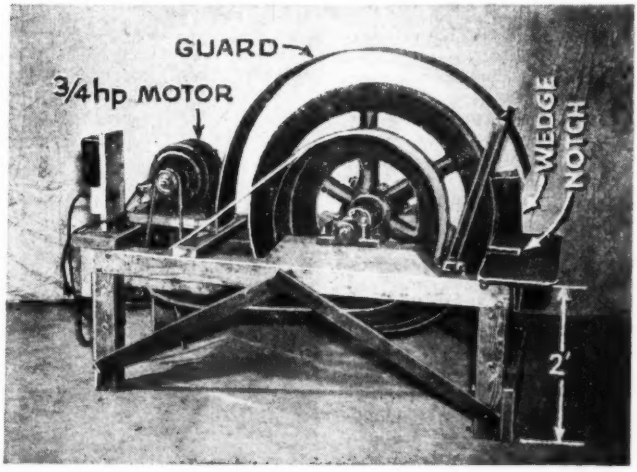
That little one-half horsepower electrically-driven hammer mill took the "grind" out of grinding for the Linebaughs.

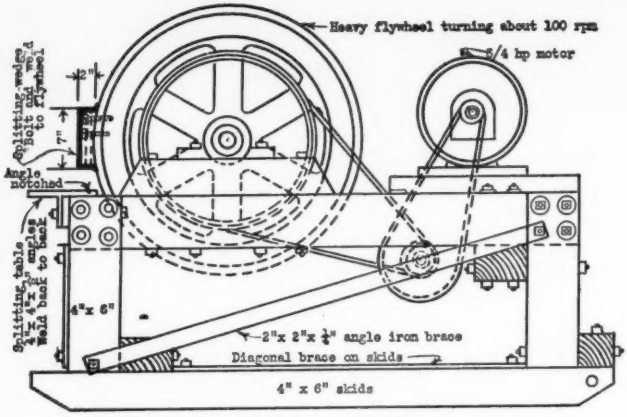
Wisconsin Wood Splitter

By **PROF. H. D. BRUHN**

DURING the war we developed a wood splitter at the University of Wisconsin. It was demonstrated on our Labor Saving Caravan. The splitter has a much greater capacity than the piston types and it seems to be relatively safe to operate. At the demonstrations we would split any chunk that was lugged in.

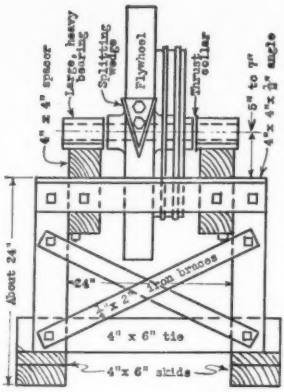
The main part of this splitter is a very heavy flywheel from an old engine or other piece of machinery. It must have a heavy shaft and good heavy bearings. The splitting wedge is attached to the rim of the flywheel. It strikes the block of wood as the wheel turns around. The splitting table is made of two heavy angles welded together back to back. One of these angle irons has a notch cut in it big enough to let the splitting wedge go down through. The block of wood to be split is laid on its side on the splitting table with its end under the wedge. In other words, the wood is split from the side rather than from





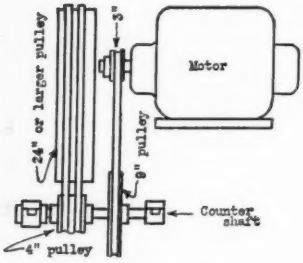
Side View of Wisconsin Wood Splitter

Below: Splitting-end View



the end. In this way ones hands are kept away from the splitting wedge. It is well to wear leather gloves to protect the hands from splinters.

The frame of the splitter should be made to fit the wheel and shaft that is available. Two feet is a good height to the splitting table. A width of 3 ft makes a good stable machine. The frame must be made of good sturdy timbers because it takes quite a beating. Oak 4"x4" or fir 4"x6" proved satisfactory.



Belting and Pulley Layout

The splitting wedge is made of three pieces of flat steel ½ inch thick. The two pieces which make the sides of the wedge are 2 inches wide and should have their edges shaped to fit the curve of the wheel rim. The third piece is a triangular shaped piece that is welded between the sides of the wedge. Two holes are drilled through this triangular piece to match holes drilled into the rim of the flywheel. The holes in the wheel are tapped and the wedge fastened to the wheel with cap screws. The wedge is then securely welded to the rim. If the weld should crack, the capscrews will keep the wedge from flying off. The size of the wedge depends on the width of the flywheel. The wedge should be just slightly wider than the rim of the wheel.

A metal guard should be placed over the wheel for safety. Clearance under the guard should be about 12 inches. This is ample for large blocks of wood, since they are split from the side.

A ¾ horsepower motor was ample for the splitter shown in the accompanying pictures and drawings. A single A section V belt serves to drive the counter shaft from the motor. Two A section belts are used between the counter shaft and large pulley.

Clip Flanks for Clean Milk

This is just a reminder about clipping your milk cows. You have probably done it this fall.

They need to be kept clipped all of the time they are being milked. Clipping the udders, flanks and tails helps keep dirt out of the milk. It is easier to keep the cows clean and to apply the hot towels in preparation for fast milking. Electric clippers are standard equipment.

Light That Didn't Fail

HOUSTON, Texas.—A large, old-fashioned light bulb with a carbon filament still is burning in the Southern Pacific building here after 39 years.

There are 137,000 clergymen in the United States, says a Twentieth Century Fund report, or about 104 for every 100,000 persons. In 1900 there were 137 clergymen for every 100,000.

THIS MONTH'S CATALOG OF

FRIGIDAIRE PRODUCTS FOR THE FARM

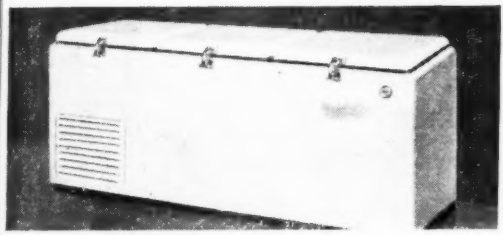
A BIG New Frigidaire Refrigerator Made to Do a BIG Job on the Farm

Everything about this new beauty is planned to give you more food-keeping space per dollar, more convenience.

Here's room for a *big* supply of meats . . . room a-plenty for largest melons, tallest bottles . . . more room for fruits and vegetables in the big Hydrator . . . more room for frozen foods. Far more storage space—yet *no more* kitchen space!

Look at the sparkling style. Look at the famous Meter-Miser mechanism—cuts current costs to the bone, proved in more than 5 million installations. Then ask the price—you'll say it's America's biggest refrigerator value!

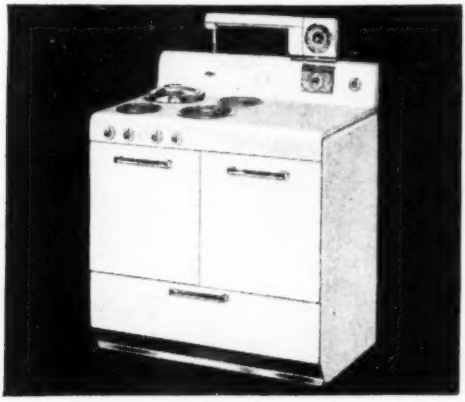
MODEL MJ-11. 11.5 cu. ft. capacity. 22.7 sq. ft. shelf area. New Super-Freezer. Quickube Ice Trays, 4 single and 1 double-width. Aluminum Multi-purpose Tray, 5.1 qt.; Hydrator, 26 qt.; 5 qt. Cold Storage Tray. Non-spill shelves. Cold control. Height, 65¾"; width 34 7/16" depth 28 9/16".



Frigidaire 18 Cu. Ft. Farm Freezer

Now's the time to enjoy the savings, the year-'round good eating a home freezer gives—and here's the *right* freezer to buy. *It's big*—holds up to 650 lbs. of food. *It's easy* to use—has smooth baked enamel surfaces; counter balanced lids stay open in any position; organized space eliminates crowding. *It's safe*—has ⅓ H.P. Frigidaire compressor, famous for trouble-free service; alarm rings if power fails.

MODEL HK-18-T. Freezing compartment, 2.5 cu. ft. Storage compartment, 16 cu. ft. Length, 93"; height, 37"; width, 29". Special coil for fast, below-zero freezing. Extra thick insulation. All steel. Handy accessories available.



De Luxe Frigidaire Electric Range

Here's a moderately-priced range with lots of "extras"—features that save time when farm schedules are heavy, give you more free hours. Cook-Master Control cooks oven meals while you're away. Automatic timer. Three-Way Thermizer is a current-saving cooker for canning, for soups, stews; is a small oven or extra surface unit; Thrifto-Matic Switch turns to simmer at proper time. Fast, Even-Heat Oven.

MODEL RK-40. Lifetime Porcelain finish. Acid-resisting porcelain cooking-top. Radiantube 5-Speed Surface Units. Full-width storage drawer. Signal-lights. Height, 48½" overall; width, 40"; depth 25¼".

MAIL THIS COUPON FOR FULL INFORMATION

Frigidaire Division, General Motors Corporation
1307 Amelia St., Dayton 1, Ohio
(In Canada, 665 Commercial Rd., Leaside 12, Ontario)
Please send information about the products checked:

- ☐ Refrigerators
- ☐ Electric Ranges
- ☐ Electric Water Heaters
- ☐ Home Freezers
- ☐ Milk Coolers
- ☐ Laundry Equipment
- ☐ _____ other products

Name _____

P. O. Box _____ *RFD* _____

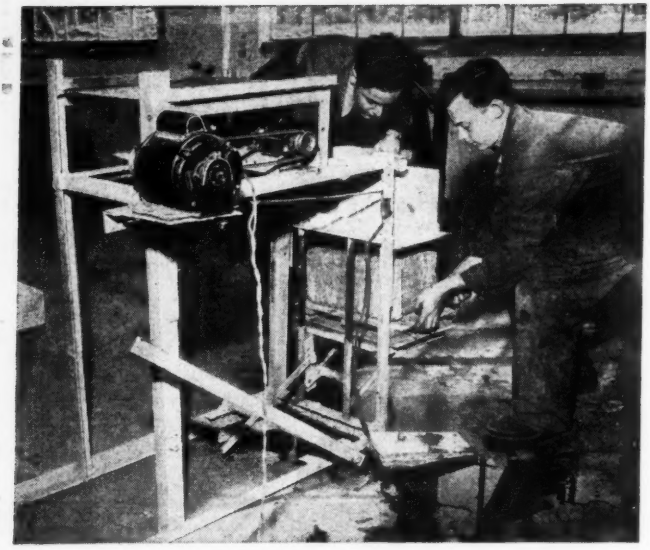
City _____ *State* _____

Listen to Frigidaire's new LUM 'N' ABNER *show.*
See newspaper for time, station

YOU'RE TWICE AS SURE WITH TWO GREAT NAMES **FRIGIDAIRE**

MADE ONLY BY **General Motors**

SEE YOUR FRIGIDAIRE DEALER — or mail coupon for information about the Frigidaire products featured or mentioned in this advertisement. Also, Frigidaire Kitchen Cabinets, Sinks, Dehumidifier, "commercial" refrigeration and air conditioning equipment.



Vo-Ag Boys Make Concrete Blocks

The picture shows two boys of the Shawnee Mission High School. These Missouri Vo-Ag boys are Jack McCoy, left, and Wayne Thies, right. Making concrete blocks is one of their projects.

The machine is operated by a ¼ hp motor. A vibrator packs the mix into the forms so there are no air pockets. The motor is controlled by a foot-operated switch. A hand lever inverts the mold and another lowers the base with the finished block on it.

The boys are making blocks for use on their own home farms. None are being sold. One boy estimates that he will make around 1000 blocks. The block machine is loaded on a trailer and moved from farm to farm where it is needed.

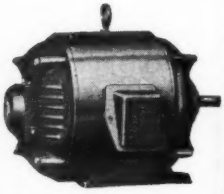
DEAN SIMS

Electrical Capacity Growing

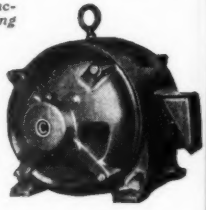
At the end of 1946 the total generating capacity of the electric industry in the U. S. was 50,316,621 kilowatts. Additions have been made as follows: 1947, 2,000,000; 1948 (being installed) 4,750,000. To be installed: 1949, 6,700,000; 1950, 5,000,000; 1951, 6,060,000 kw. Figures from Edison Electric Institute.

CENTURY PUMP MOTORS

Assure Dependable Water Supply



Century Repulsion Start Induction brush lifting motor



Century Squirrel Cage Induction motor

Century Capacitor motor

Century pump motors are built to give a long life of satisfactory service with a minimum of care and attention. When they are furnished with modern pumps they provide water when and where you want it — day and night.

Over a million Century pump motors are operating water systems for farms, dairies, milk plants, irrigation projects and water works, industrial processing plants, with the dependability of a city water system.

Be sure your water system and other electrically powered equipment is powered by Century motors.

CENTURY ELECTRIC COMPANY

1806 Pine Street • St. Louis 3, Missouri

Offices and Stock Points in Principal Cities

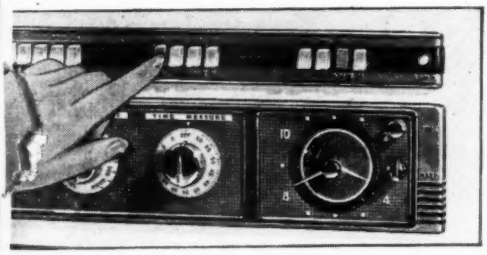
Century MOTORS

522

Bake More...
Broil More
with 2 Big Sealed
Heat Ovens

HOTPOINT PRESENTS

New Double-Oven Range with *New "Pushbutton-Cooking!"*



Pushbutton Controls and "Talking Colors" Make Cooking So Easy! So Speedy! Here's Hotpoint's back panel where each cooking unit has its own set of simple Pushbutton Controls. Choose your cooking speed—then push a button for fast, accurate, measured heat!

HERE'S a modern kitchen marvel—Hotpoint's big new Double-Oven Electric Range, with Pushbutton Controls and "Talking Colors."

● ● Into this wonderful new kind of range, Hotpoint has built *two* of its famous Sealed-Heat Ovens. Both ovens are complete—you can bake or broil in either or both—and there's enough oven space for a full dinner for 20 people.

● ● *AND* up on the beautiful back panel are Hotpoint's amazing new *Pushbutton Controls.* Just choose the cooking speed you want for any unit. Then—push a button. *Presto!* You get accurate, measured heat, *and a colored light shows you what unit is on—at what speed!*

● ● Ask your Hotpoint dealer to show you "Pushbutton-Cooking" and all the other wonderful features of this great new Double-Oven Range!

HOTPOINT INC. (*A General Electric Affiliate*), **Chicago**

Everybody's Pointing To

Hotpoint *Automatic Electric Ranges*

Pig Hovers for Prize Hogs

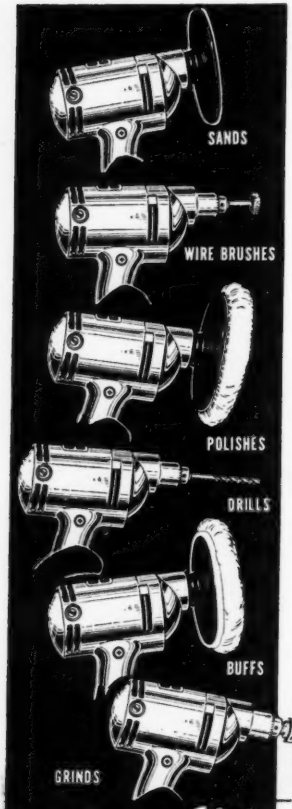
By **MELBA KLAUS EICHEN**

Leroy Turner's Wayne county hogs have placed high on the winner's list for the past five years at the Indianapolis stock show. Excellently finished, big litters are required to accomplish this. Turner gives a lot of the credit to his pig hovers.

When farrowing time arrives he stays with the sows and pigs almost constantly.

In every farrowing pen he uses a pig hover which is triangular shaped and fits into a corner of the farrowing pen. The newborn pigs are immediately placed in the hover. It is heated by an electric lamp in a reflector placed in a hole cut in the top of the hover. The hover also prevents the sow from laying on the pigs. The little pigs soon make themselves at home in the hover with its clean shavings for bedding. Turner has changed the original hover by closing the front and adding a slide door. This door may be closed, shutting the pigs under the hover.

EDITOR'S NOTE:—In December 1947, we told how Dan Rumler of Chambersburg, Pa. gave his pigs an even start by keeping them away from the sow until the whole litter was born. He put them in a tub with a heat lamp over them. Perhaps the same thing could be accomplished with this closed front hover. Then each of the pigs would be dry and warm and have a chance at that first colostrum milk from the mother sow.



MANUFACTURED BY Clarke
PIONEER AND LEADER IN FLOOR SANDING, POLISHING AND MAINTENANCE MACHINES
Sales and Service Branches in all Principal Cities

DEALERS!
Write now about the new Clarke Duo merchandising plan. Start making big profits on this fast selling farm tool.

6 TOOLS IN ONE!

LOW COST!

Duo Sander-Polisher (only) ..... $ 36.50
Set of 21 Accessories ..... $ 12.50
Duo with Complete set of 21 Accessories ..... $ 49.00
F.O.B. Muskegon, Michigan

Here's your all-purpose farm tool! Use it for dozens of jobs in your home and barn, and on your auto truck and farm machinery. The Clarke Duo sands, polishes, drills, grinds, buffs and wire brushes—actually 6 tools in one! Anyone can quickly interchange accessories. Lightweight, powerful, easy to operate. Approved by Underwriters' Laboratories. AC-DC.

The Duo is a *practical* gift for both men and mechanical-minded boys. Get it attractively Christmas packaged at your dealer's or order by coupon below.

A multitude of uses for the Duo! Sand and repair farm implements, furniture, cabinets, and various other wood and metal parts, remove paint and smooth plaster; grind various shaped surfaces and narrow openings; drill holes up to ¼ inch in metal, composition and wood; wire brush to clean small spaces and to remove rust and other materials; buff and polish repaired furniture.

21 Duo Accessories! Sanding: 3" pad assembly, 3 grades each of 3" and 5" abrasive discs. Polishing: two 5" lamb's wool bonnets. Grinding: drum and cone adapter assemblies, 3 grades each of drum and cone abrasive sleeves. Drilling: drill chuck and adapter for drills up to ¼" (drills supplied by dealer). Buffing: 5" wool buffing pad. Wire Brushing: ½" steel wire brush.

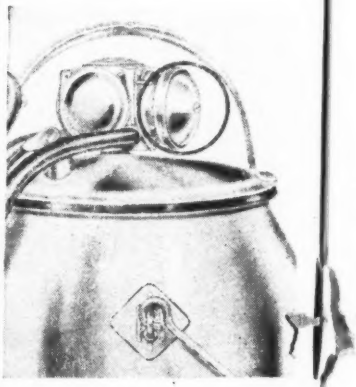
the perfect christmas gift!
Give him a Clarke Duo beautifully gift wrapped. Order now from your dealer or by coupon.

CLARKE SANDING MACHINE COMPANY
5312 Clay Avenue, Muskegon, Michigan
Send ☐ Clarke Duo Sander-Polisher (only) $36.50 ☐ Complete set of accessories $12.50. Clarke Duo Machine complete with all accessories, $49.00. ☐ Enclosed money order for $ ☐ Ship C.O.D. (I pay postage) ☐ Package for Christmas Gift.

NAME
ADDRESS
CITY ZONE STATE

Timer on Milker

Managed milking, which is also *timed milking*, has been practiced now for a number of years. All manner of devices have been used for timing. Now comes International Harvester with a simple timer that attaches



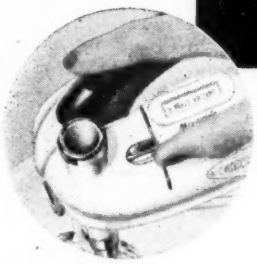
to the face of the pulsator cover, right on the milker. You just attach the milker to the cow, give the timer knob a turn. When the time is up for that cow, a bell will ring.

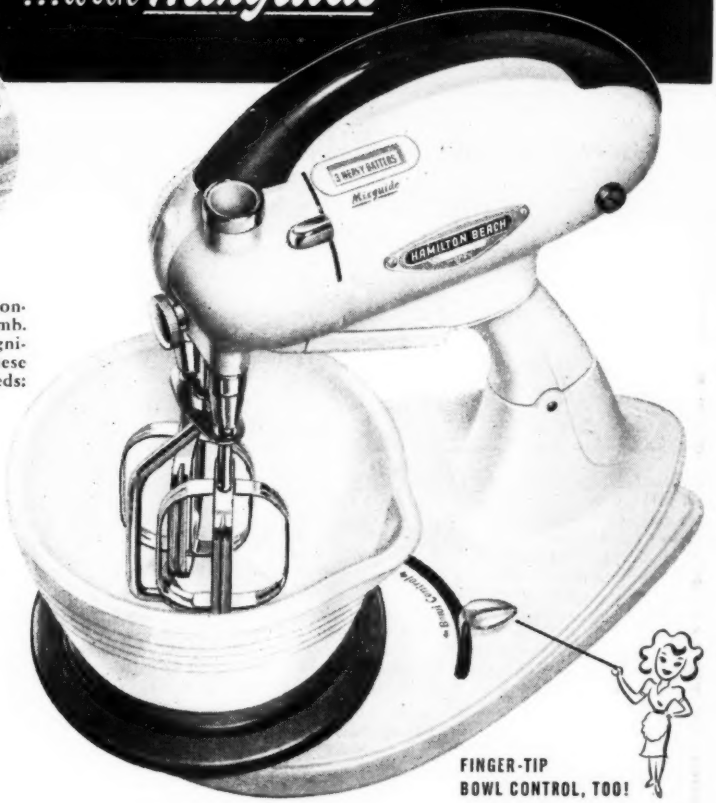
The timer does not have any connection with the pulsator operation. The timer may be set at any point between 1 and 6 minutes.

About 85 per cent of the nation's corn crop never leaves the county where grown since it is used for livestock feeding.

It couldn't be Simpler to operate!

the New HAMILTON BEACH ...with *Mixguide*





Mixguide puts speed control right under your thumb. Right under your eye, magnified for flash reading, are these ten thoroughly tested speeds:

1 SLOW MIXING
2 SLOW BEATING
3 HEAVY BATTERS
4 JUICING FRUITS
5 ICINGS, CREAMING
6 WHIP CREAM
7 WHIP POTATOES
8 CANDY, BEAT EGGS
9 COOKED ICINGS
10 ATTACHMENTS

FINGER-TIP BOWL CONTROL, TOO!

Shifts bowl while beaters are turning. Blends all ingredients evenly. Exclusive!

TAKE THE KINKS out of cookery with the help of speedy *one-hand operation.* You hold the mixer in one hand and set the speed with your thumb. Exclusive!

MAKE MEAL-GETTING minutes count with easy *one-hand portability.* Lighter-weight mixer glides off the stand for use anywhere. No tricky catch to release, nothing to detach. Exclusive!

LOADS OF OTHER "extras" make Hamilton Beach the *easiest mixer to use.* Full power even in heaviest batters. Comfortable, balanced handle fits your fingers, frees you of strain. Grooves in mixing bowls are easy to grip, guard against slipping.

SEE THE NEW HAMILTON BEACH at your dealer's. Test it—see for yourself why this is the easiest mixer for you to use. *Hamilton Beach Company, Division of Scovill Manufacturing Co., Racine, Wis.*

the New
HAMILTON BEACH
Food Mixer

Beats Everything for Saving You Work!

Farm Homes Have Electric Appliances

Last spring the Bureau of Agriculture Economics, USDA, made a survey of 8,400 farms throughout the country. They found that about 43 percent of the farm homes in this country now have electric washing machines, 38 percent have electric refrigerators, and 27 percent are using electric power for water systems. Further, 25 percent of the farms have electric vacuum cleaners, 12 percent have electric ranges, 10 percent have water heaters and 7 percent have electric sewing machines.

Pacific Coast States reported the largest number of farms having electric appliances and Southern States the smallest number. The electric washer was the most commonly reported appliance in all areas except the South Atlantic and East South Central States. There the electric refrigerator was more commonly reported. The electric range was more popular with farm families on the Pacific Coast than in other areas. However, farms in the East North Central area reported that one farm in three was using electricity for cooking. Ten percent of all farms surveyed reported electric water heaters. On the Pacific Coast more than 20 percent of the farms reported this item.

Seven percent of farm homes had an electric sewing machine but replies to a survey in 1945 showed that 82 percent had some kind of a sewing machine. Apparently many farm homemakers still sew by foot power in spite of the increased use of electricity on the farm.

Increased availability of electric power, higher farm incomes and more money-making uses of electricity have made it possible for many more farm families to use electricity. In the 10 years between 1937 and 1947, the number of farms obtaining electricity from central power stations increased more than threefold.

With the OSTERIZER to speed meal-making — morning, noon and night—long kitchen hours become a thing of the past. Soups, salads, cakes, desserts, pies, cookies, health drinks, baby foods, salad dressings can be prepared with time-saving efficiency . . . with flavor improved . . . vitamins preserved. There is nothing in the world like an OSTERIZER . . . there is no other mixer with such exclusive features as an open-at-both-ends, easy-to-empty glass container; an easy-to-clean, removable container bottom which can be used with a mason jar; a lustrously finished, moisture-proof base to protect the motor.

Thousands of enthusiastic owners use the OSTERIZER dozens of times daily to perform a multitude of kitchen tasks. For all that it can mean to you in time, effort, money saved, see your dealer or write for details — John Oster Manufacturing Co., Racine, Wisconsin.

Ideal for Any Gift Occasion
Does 100's of Kitchen Chores in Seconds

- Liquefies fruits and vegetables
- Blends health drinks and beverages
- Mixes light batters
- Grinds coffee, powders sugar
- Churns butter, whips cream
- Purees baby foods

Hundreds of other practical, everyday uses are given in colorful, sixty-eight page book of more than 300 delightful recipes.

The only electric mixer with a removable container bottom . . . for easy cleaning . . . for use on a mason jar.

Osterizer
REG. U.S. PAT. OFF.

THE ORIGINAL LIQUEFIER AND BLENDER

John Oster Mfg. Co., Dept. 1012, Racine, Wis. Send additional information on the OSTERIZER.
Name.....
Address.....
City.....State.....

MAIL COUPON TODAY

X-18

New Farmstead Wire

Several companies have been busy developing a new type of non-metallic sheathed cable especially for farm use. It looks something like the old non-metallic, except it is smaller and has a different cover. The big difference is in the way it resists moisture and fumes, and in its durability. It's tough stuff.

The General Eletcric cable is

known as Super PVX. The wires are insulated with thermoplastic insulation, then wrapped in paper, then glass braid and finally covered with a smooth, tough, ivory or brown thermoplastic sheath. It is approved by the Underwriters for use wherever non-metallic cables are allowed.

Corn is the No. 1 grain crop of the nation, covering about one out of every four acres planted.

Fair Trade Price $21.50.

Look for the
TOASTMASTER ***name***
on your toaster
...others will!

Your gift of the new "Toastmaster" Toaster says Merry Christmas . . . and means it! For most everyone knows it takes a bit of doing to snare this widely sought-for prize. Your efforts can't fail to be remembered. Neither can the name that identifies America's finest toaster escape attention. So when you buy—look for the "Toastmaster"* name on your toaster . . . others will!

JUST PRESS THE KEY
—and the Superflex toast timer automatically delivers perfect toast every time.

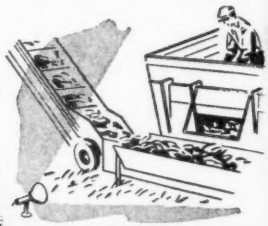
TOUCH THE BUTTON
—and watch the crumb tray swing open instantly for quick, easy cleaning.

LIFT THE TOASTER
—easily, safely, by finger-fitting handles that are always cool to your touch.

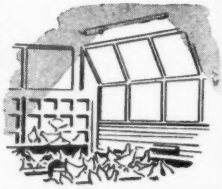
THE NEW **TOASTMASTER** ***Automatic Pop-Up Toaster***

*"Toastmaster" is a registered trademark of McGraw Electric Company, makers of "Toastmaster" Toasters, "Toastmaster" Electric Water Heaters, and other "Toastmaster" Products. Copyright 1948 Toastmaster Products Division, McGraw Electric Company, Elgin, Ill.

YOU CAN BE SURE..
IF IT'S Westinghouse

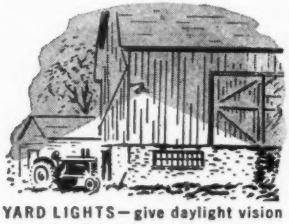


FLOODLAMPS — for permanent installation or handy in emergencies



STERILAMPS — protect livestock from air-borne bacteria

FLUORESCENT LAMPS — flood farm workshops with glareless light



YARD LIGHTS — give daylight vision and safety in barnyard at night

Electric Light...

A PRODUCTIVE FARM TOOL

When a farmstead is hooked to the high lines, the family's first demand is for electric light. And rightly so. No other application of electricity on the farm adds so much to the family's comfort, convenience and security. But don't forget . . . electric light is a valuable productive tool, too. It brings daylight vision and safety at night to every farm building . . . every work area . . . 24-hour efficiency to all farm tasks. A well-lighted farmstead steps up production and profits . . . allows more time for productive work.

See your Westinghouse Dealer for all farm lighting needs . . . consult him on your lighting problems. And, while you're there, ask him to show you the many other Westinghouse products for the farm. J-91737

Just off the Press . . .

An authoritative 10-page, illustrated bulletin on the application of electric light to specific farm productive operations. Mail coupon today for your free copy.

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Plants in 25 Cities . . . Offices Everywhere

Products for the Farm

Rural Electrification Department

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Westinghouse Electric Corporation
Rural Electrification Department
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Send my free copy of the bulletin—"How to Apply Lighting on the Farm".

Name.....

Address.....

Type of Business.....

"convenient...everything within easy reach...and so delicious!"

Mrs. Solon Butterfield, Middletown, N. Y., shown here says of her De Laval Speedway Food Freezer: "I particularly like the convenience of the De Laval Speedway Food Freezer; the compartments are so placed that everything is within easy reach. I have frozen many kinds of food and everything has been a success and extremely delicious."

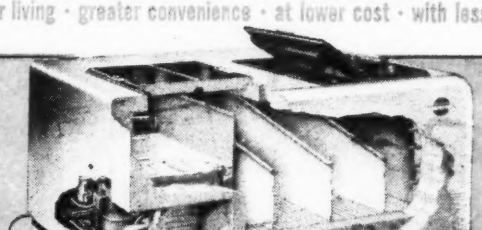
See the De Laval Speedway Food Freezer at your local De Laval Dealer's store today.

THE FOOD FREEZER
DE LAVAL SPEEDWAY
MADE ESPECIALLY FOR FARM USE

INSIDE AND OUT these planned-for-the-farm features of the

DE LAVAL SPEEDWAY FOOD FREEZER add up to

better living · greater convenience · at lower cost · with less work!



Model F-100

16½ cu. ft. capacity · stores up to 650 lbs. assorted frozen foods · Separate freezing and storage compartments · Dependable, economical, hermetically sealed unit · Light, convenient "cold saver" lids · Rust-proof aluminum interior · Movable partitions for convenient packing · Efficient fibre-glass insulation · Beautiful gleaming white Delux finish on bonderized steel.

A FAMOUS OLD NAME ON A GREAT NEW PRODUCT!

De Laval

THE DE LAVAL SEPARATOR CO.
165 Broadway, New York 6
427 Randolph St., Chicago 6, Ill.
61 Beale St., San Francisco 5, Cal.

NOW! MAIL THIS COUPON TODAY!

The De Laval Separator Company, Dept. 10-OF
165 Broadway, New York 6, N. Y.

Please send me printed matter on:

☐ Model F-100 Speedway Food Freezer (16½ cu. ft.)
☐ Model F-200 Speedway Food Freezer (35 cu. ft.)

Name_____

Town_____ RFD____ State____

Easy Treatment for Fence Posts

It is reported by the Dow Chemical Company of Midland, Mich., that pentachlorophenol gives complete protection against both decay and insect attack of fence posts. Five per cent pentachlorophenol dissolved in petroleum oil gave complete penetration of the posts in 48-hours soaking at air temperature. Three 55-gallon oil drums were welded end to end to form a deep enough tank to immerse the posts.

New Items of Plastic

"Lucite" that window-clear duPont plastic is now available in pink, blue, green or white. It is made up in virtually unbreakable wash-basins and kitchen sinks.

Bakelite Polyethylene is made up into drinking glasses, ice bowls, pastry sheets.

Another plastic known as Vinylite is made up into table mats, covers for appliances, window shades, an inflatable dress form, and a baby bath.

Capitalism Under Democracy

The next time some fast-talker tries to tell you how fine it is to live under a "planned" economy, and how tough it is to survive under the free American way, tell him this: With only 6% of the world's people, we have . . . 46% of the world's electric power . . . 48% of the world's radios . . . 54% of the world's telephones . . . 59% of the world's steel capacity . . . 60% of the world's life insurance . . . 85% of the world's automobiles . . . and 60,000,000 people employed, *not* as slaves *but* as volunteers.

L. P. Boulware, V.P., G.E.Co.

Three factors have made it possible for American agriculture to lead the world in food production — scientific farming, mechanization of equipment and efficient management.

—I'm proud I am a farmer!—

Here, folksies, is the RIDDLE OF THE MONTH: WHERE do we get DRAGON MILK? ANSWER: From cows with SHORT legs. (Caw! Caw!) . . . . . MANY wise words are spoken in jest but heaven knows they don't compare with the number of FOOLISH words spoken in EARNEST . . . . . Confucious is SUPPPOSED to have said: "Man who use VENETIAN BLINDS for ALIBI is SHADY CHARACTER." . . . . . SHORT SHORT STORY: TITLE—"NOT AS IT WAS PICTURED"—A neighbor called on Lem Stuporman who had JUST received a shipment from a well known mail order house. "Lem," queried the neighbor, "whatcha got there?" "A new-fangled thing called a BATHTUB," replied Lem in disgust, "but I aims to send it BACK. The one I ORDERED had a GAL in it." . . . . . UMBRELLA: JUST about the ONLY thing we can STILL put away for a RAINY DAY . . . . . REVISED PROVERB: "BRIDES make strange bread, fellows." . . . . . Havya heard the story about the absent minded musician who kissed her VIOLIN good night and took her BOW to bed? . . . . . If you want to be the life of the party just walk into the middle of a group and state boldly: "It's a DIRTY UNDERHANDED GAME!" SOMEONE is SURE to ask, "WHAT IS?" Now's YOUR chance! YOU say BRIGHTLY: "PITCHING HORSESHOES." . . . . .

"WHAT is this KLEPTOMANIA that I read SO much about? Is it CATCHING?" "NO; it is TAKING." . . . . . Sez Jimmy Durante: "In Hollywood when a FINE FIGURE of a man marries a cute NUMBER they USUALLY DIVIDE before they MULTIPLY." . . . . . JINGLEJOLLY DEPT.: "I met a little salesgirl, I met her in the Fall, And EVERY time I kissed her—SHE cried: "Will THAT be ALL?" (Origin Unknown) . . . . . FREEDOM: The ability to do as YOU please without considering ANYONE EXCEPT the WIFE, BOSS, POLICE, NEIGHBORS and the GOVERNMENT . . . . . OVERHEARD at a banquet: "He's a GINGER ALE speaker—a good talker, but goes FLAT after he's been UNCORKED a few minutes."

. . . . . EVERSTOPTOTHINK?—a wife who can spot a BLONDE hair on her hubby's coat twenty feet across the room JUST CAN'T see a pair of garage doors TEN feet WIDE . . . . . —DUFFY.

ONLY THE DE LAVAL MAGNETIC *SPEEDWAY* MILKER GIVES YOU THIS *Protection!*

UNIFORM MILKING...Not Too Fast; Not Too Slow!

The "magnetic heart" of the De Laval Magnetic Speedway Milker controls pulsations for each unit in operation. Pulsation speed cannot vary; all units milk the same at every milking.

UNIFORM VACUUM...Not Too High; Not Too Low!

Positive De Laval Speedway Vacuum Controller assures correct vacuum for best milking at all times. Non-adjustable for perfect milking assurance.

UNIFORM OPERATION...No Adjustments!

No pulsators or surcingles to adjust from cow to cow or from milking to milking. Simply set unit on floor, attach vacuum hose to automatic stall cock and attach teat cups.

New De Laval Sterling Milker

Another great new De Laval Milker for still better milking. Stainless steel units.

New De Laval World's Standard Series Separators

The cleanest skimming, easiest-to-clean separators ever built. Every part milk touches is stainless steel. Hand or motor drive.

New De Laval Speedway Water Heater

De Laval engineered for the dairyman. Supplies 12 full gallons of 185° water. "Lifetime" copper tank.

New De Laval Speedway Vacuum Can Hoist

Takes the work out of loading and unloading the milk cooler. Operates on vacuum supplied by milker pump.

De Laval
THE DE LAVAL SEPARATOR CO.
165 Broadway, New York 6
427 Randolph St., Chicago 6, Ill.
61 Beale St., San Francisco 5, Cal.

The De Laval Separator Company, Dept.10-O
165 Broadway, New York 6, N. Y.
Please send me printed matter on:

- ☐ De Laval Milkers
- ☐ De Laval Separators
- ☐ De Laval Freezers
- ☐ De Laval Water Heaters
- ☐ De Laval Milking Truck
- ☐ De Laval Can Hoist

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Town_____ RFD____ State_____

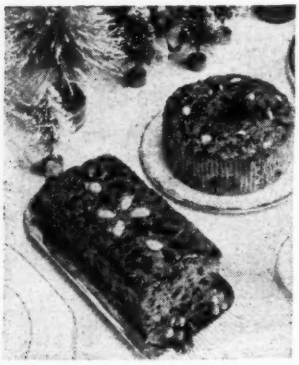
Electrical Housekeeping

Edited by NAN SHAW
329 Memorial Union, Ames, Iowa

Christmas in the Kitchen

December Fruit Cake

CHRISTMAS is really in the air when spicy smells float out of the kitchen. Once again you can get good spices for fruit cake, so here's a recipe that's simple and good. When you put it in your electric oven, set it at 250°, and you can forget about it—except for the tantalizing fragrance—for 4½ hours. Then it should look like the picture.



3⅓ c flour	1 c sugar
1 t double-acting baking powder	6 eggs
1 t salt	4½ c raisins
1 t cinnamon	4½ c currants
½ t cloves	1 c thinly cut citron
½ t mace	¼ c grape juice
1 c butter	¾ c light molasses

Sift flour, measure, add baking powder, salt, and spices, and sift together three times. In electric mixer, cream butter, add sugar gradually, and cream together until light and fluffy. Add eggs, one at a time, and beat well. Add fruit, grape juice, and molasses, and mix well. By hand, add flour gradually, beating after each addition until smooth. Turn into tube pan, which has been greased, and lined with heavy paper. Bake in very slow oven (250° F.) 4½ hours or until done. Makes 5½ pounds fruit cake. Cool cake 12 hours before removing from pan for storing.

Cranberry Raisin Pie

This cranberry pie is a ribsticker. It's easy to serve because it isn't runny. When you take it out of your heat controlled oven you can count on its being just right.

3 T quick cooking tapioca	3 c cranberries, chopped
1¾ c sugar	1 c seeded raisins
½ t salt	¾ c water

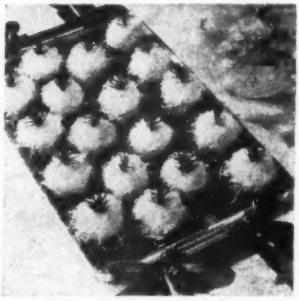
1 recipe pie crust

Combine tapioca, sugar, salt, cranberries, raisins, and water. Let stand 15 minutes. Line a 9 inch pie plate with pastry. Fill pie shell with cranberry mixture. Moisten edge of pastry with cold water. Add top crust. Bake in hot oven (450° F.) 15 minutes. Then reduce heat to moderate (350° F.) and bake 25 minutes longer, or until cranberries are cooked.

For Christmas time this pie can be topped with stars cut out of pie crust dough.

Coconut Snowballs

For a quick Christmasy food touch, put your electric mixer and range to work for you. Make up your favorite cup cake and seven minute frosting recipes.



Cover cooled cup cakes with frosting and sprinkle thickly with shredded coconut. Arrange on large serving platter or individual plates and insert a small twig of evergreen in each cake. For variation, use a candle holder with tiny red or green candle.

Pumpkin and Mince Thrill

When two old-time favorites like pumpkin and mince get together in one pie, there's a taste treat in store for the family. Delicious and nutritious, it's a good dessert for your Holiday dinner. Best of all, it's prepared in a jiffy with your electric mixer.

PIE CRUST: 1 cup sifted all-purpose flour, ½ teaspoon salt, ⅓ cup shortening, 2 to 3 tablespoons icewater.

Sift flour and salt together into large mixer bowl. Add part of shortening. Mix only until particles are size of a pea. Sprinkle water over mixture. Beat on No. 1 (low) speed only until dough holds together. Roll out on floured board, fit into pie pan, flute edge. Add filling. Bake in hot oven (425°F) 20 minutes. Reduce to 375°. Bake 35 minutes longer.

FILLING: 2 eggs, 1½ cups ready prepared mincemeat, ⅛ teaspoon cloves, ⅛ teaspoon nutmeg, ½ teaspoon cinnamon, ¼ teaspoon salt, ⅓ cup sugar, 1 cup cooked or canned pumpkin.

Beat eggs in small bowl of mixer at No. 8 (high) speed until fluffy. Add remaining ingredients. Beat on No. 1 speed until blended. Makes one 9 inch pie.

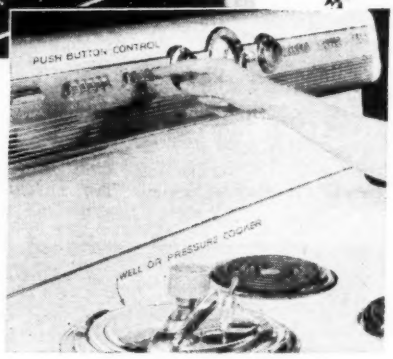
Would You Like These for Christmas?

RANGES

IT'S as simple as changing stations on the radio to operate the new push button electric range. The finger tip controls are mounted on the back of the range, high enough to be above cooking utensils. Bright colors shining through the plastic buttons tell which unit and what heat is on.

A popular added convenience is a heating unit in the deep well which can be raised for use as an extra surface unit. Then for kitchens with uneven floors some ranges have leveling screws.

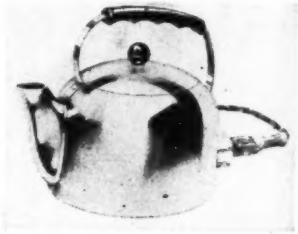
For folks who like cooking with pressure there is a deep well kettle which also can be used as a pressure cooker. An extra pressure lid is substituted for a non-pressure lid. And once again a few of the range manufacturers are offering double oven ranges. The popular combination ranges are available for kitchens without other heat. The fuel end may be equipped for coal, wood or oil.



Above: Young Santa's eyes pop when he sees a 20-pound turkey, 2 dozen rolls, buttered string beans, and candied sweet potatoes all being cooked at once! It is possible to do with the double oven ranges now being produced. Model shown is Hotpoint's new pushbutton electric range cooking this complete Christmas dinner.

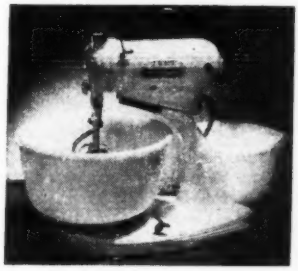
TEAKETTLE

Some folks feel that they just can't get along without a teakettle. But the experts say that a teakettle is very inefficient if you have an old one that doesn't fit your electric range units. The solution is an electric teakettle, whether you do or don't have an electric range. Plug it in to your appliance outlet and you have boiling water in a jiffy. Beauty of this kettle is that it won't boil dry. When the water gets low, the current automatically shuts off.



MIXERS

A portable food mixer has always been a popular Christmas gift for busy homemakers. This year you will find them more plentiful than any year since the war. A mixer can be used for hot or cold foods at the range or on the mixing counter. It does need to be out on a counter top, plugged into a convenience outlet. Then it will be used daily and save a lot of kitchen time. If you buy a mixer with provision for attachments, you can add, later on, a shredder, slicer, food chopper and other items.

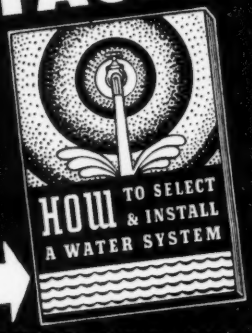


IRON

Whether you're left or right-handed, this iron fits your hand. A fabric control dial automatically maintains the ironing heat best for each fabric.

There's a cord control--a metal spring that clamps onto the side

DEMING *tells you the* FACTS!



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DEMING WATER SYSTEMS

of the ironing board and keeps the iron cord from dragging

across your ironing. It puts an end to shifting the cord out of your way, untangling loops and twists that get into the cord, and unhooking the cord from around the end of the ironing board.

KITCHEN VENTILATOR FAN

Have you ever talked with neighbors who have a kitchen ventilator? The whole family gets satisfaction and comfort out of it. In winter it quickly exhausts strong cooking odors and smoke and steam. In summer there's no better way to keep

To next page

Our Family Gift

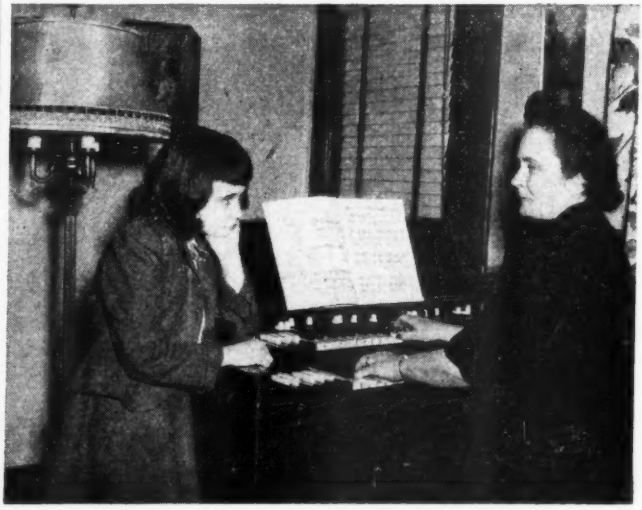
By Ruth Foster

An electric organ is usually thought of as an instrument for a concert hall or a large church or private mansion. But there is at least one on an Iowa farm.

The organ was the family's Christmas gift last year. They had a definite sum to spend on a family gift. When the council was over they were unanimous for an electric organ.

Playing the organ has been a hobby of Mrs. Gayle Cupp, a farm homemaker of near Washington, Iowa. It has also been a source of much pleasure and enjoyment to the family and friends who stop in to visit. "No matter how busy the day," says Mrs. Cupp, "we usually have a little organ music after dinner before Mr. Cupp goes to his outside work. We find it relaxing."

Mrs. Cupp is a busy homemaker. In addition to doing her own housework and caring for her family, she is a church and club organist, and takes part in Extension and 4-H activities. "After a hard day's work, when I am so tired I can hardly wiggle, a half hour at the organ makes me feel as good as new," Mrs. Cupp declares. "We enjoy everything about it. It gives us measureless pleasure and enjoyment."



your kitchen cool and comfortable. Be sure you buy a fan

large enough for the size of your kitchen. The white plastic grille on this fan snaps off and can be washed like a dish. Unhooking the chain to start the fan also opens an insulated door which keeps out cold air when the fan is not running.

FLOOR POLISHER

Polishing linoleum and hardwood floors is an easy matter

when you attach a polisher to your vacuum cleaner. For a high luster, it's enough to pass the brush over the waxed space about six times.

ELECTRIC SHEET

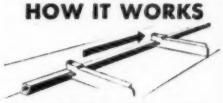
If you haven't bought an electric bed covering just because you have a good supply of

NEW! Jamesway BARN CLEANER

REG. U.S. PAT. OFF.

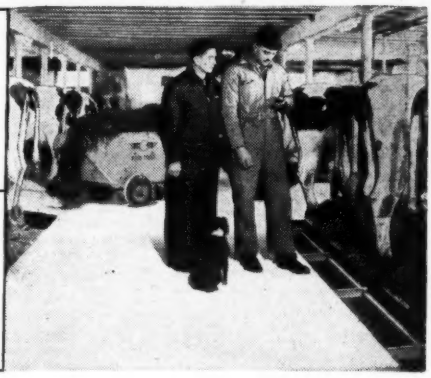
Cleans 40-cow barn in 10 minutes

HOW IT WORKS



PULL STROKE. Paddles swing out from steel tube and pull manure 8 feet—straight toward loader.

PUSH STROKE. Paddles fold against tube, slide past manure. Shuttle action quickly cleans barn.



Here it is! An entirely *new* kind of barn cleaner that licks the toughest, hardest, most back-breaking chore on the farm. It cleans 14 feet of gutter per minute. Cleans the average barn in 5 to 10 minutes. Saves you up to 2 hours every day!

This new cleaner uses a new "push-pull" action, developed and tested by Jamesway. A square steel tube slides back and forth, hugging the inside corner of the gutter. Paddles swing out on the pull stroke to catch the manure, then fold and slide back past the manure on the recovery stroke. This gives you many advantages!

You don't have to build *cross* gutters for this Jamesway barn cleaner! You don't have to bother with gutter chains and sprockets. This cleaner fits *any* width of gutter, works in a single gutter, or in gutters of *unequal* lengths. What's more, the motor and drive assembly are completely shielded, outdoors and out of the way.

It's *easy* to install a Jamesway barn cleaner. Ask your dealer about it today. You'll be surprised how little it costs. For complete information, mail coupon today!

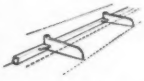
Jamesway

REG. U.S. PAT. OFF.

FT. ATKINSON, WIS.
ELMIRA, N. Y. • OAKLAND, CALIF.

FREE LITERATURE

To James Mfg. Co., Dept. EF1248, Ft. Atkinson, Wis. Please send me complete information on the Jamesway equipment which I have checked.



☐ Jamesway Barn Cleaner. Pull-Push. It's better.

☐ Jamesway Electric Ventilation. Keeps barn drier.

☐ New Automatic Pressure Waterer Electrically heated.

☐ Jamesway Electric Chick Brooder. It "Mothers them all"

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EXCLUSIVE SAFETY-GRID PREVENTS DANGER OF FIRE, SHOCK OR BURN

Electromode fan-circulated heaters are especially designed for heavy-duty performance on the electrified farm. In a minute they produce floods of fan circulated warmth, affording the user complete working comfort. Can be thermostatically controlled.

MODEL AN-30 Combination portable and suspension type heater. Recommended for rooms up to approximately 12 x 16 ft.

$64.00
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Many types available, including all-purpose portable models, built-in wall models, and suspension models. Prices begin at $31.00.

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Please send me additional information on your Electromode heaters with the exclusive Safety-Grid feature.
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Now **OUTSIDE RUNNING WATER ALL WINTER**

IOWA FREEZELESS HYDRANTS

Give your livestock running water all winter with an Iowa Freezeless Hydrant—saves costly freezeups and time lost "thawing out."

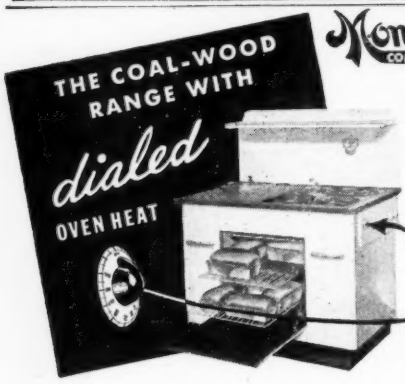
- Toggle action lock lever prevents "dribbling."
- Automatically drains hydrant below frost line.
- Economical—no springs or screw threads to wear out; lower upkeep cost.

Installs on ANY farm water system. Ask your local dealer, or write today for free circular.

WOODFORD HYDRANT CO., Des Moines 16, Iowa

Monarch "duo-oven"
COMBINATION COAL-WOOD-ELECTRIC RANGE

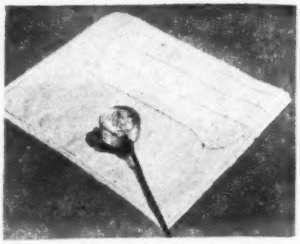
THE COAL-WOOD RANGE WITH *dialed* OVEN HEAT



All you do is set the dial to the baking temperature desired, and your coal-wood fire is supplemented by the proper amount of electric heat (or gas) to hold a uniform, controlled temperature. There's no more guesswork—no more baking failures. There are two models: Coal-Wood-Electricity and Coal-Wood-Gas. See your Monarch dealer or write to—

MONARCH MALLEABLE RANGE CO.
7038 Lake St. Beaver Dam, Wis.

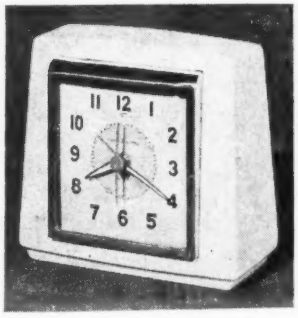
blankets and comforters, this electric sheet is your answer. It can be used with any of your bed coverings. Place it on top



of the second bed sheet. It is made the same as the electric comforter but, of course, costs less. The automatic control maintains the warmth you select, regardless of changing room temperatures.

CLOCKS

Many types of electric clocks are available. This new one sells



for $6.95. Melodious bell alarm, ivory case 4½" high, luminous hands and hour dots. Self-starting mechanism sealed in oil.

Then there are mantle clocks with chimes, clocks that turn on and off the chicken house lights, wake you to radio music or turn on the percolator before you get up. A wide choice, and the big advantage is that they keep perfect time.

NIGHT LIGHT

For a child's Christmas stocking. This one-watt, fluorescent night light costs about a cent a month to operate. The walnut-

size lamp is a safety beacon in a hallway, in bedrooms, nurseries, bathrooms and on stairways. The

glow lamp plugs into baseboard or wall outlets and has an average life of one year.

SCISSORS

A timesaver if you sew much are the electric scissors. They

zip thru any weight material and cut clean sharp edges. They're safe because they must be held in the hand with thumb pressure on the contact button before the blades will operate. When the pressure is released the cutting stops.

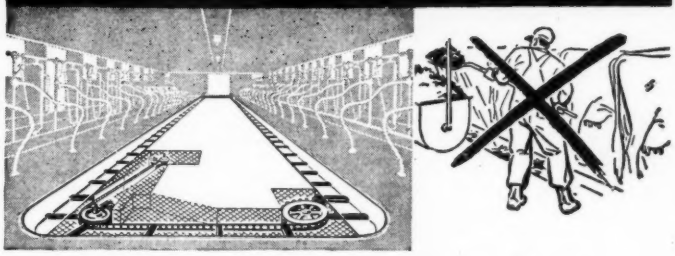
Christmas Safety

Right now is the time to get ready for your Christmas tree.

It takes just a little planning in advance to make certain that the lights on the tree, and the electric train, and the electric candles in the window will all work at Christmas time.

If you don't have the needed outlets to make connections, you have a good Christmas gift tip. A double-outlet for Christmas

A Clean Sanitary Barn without Drudgery!



SAVE up to 3 Hours or More of Time and Toil Every Day with the

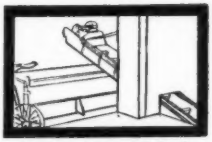
Eagle Automatic Electric Barn Cleaner

Why put time and back-breaking work on the dirty chore of barn cleaning? Do it automatically — fast — as often as needed, with the Eagle Electric Barn Cleaner. Safe — so simple a child can operate it—the equipment pays for itself in time saved and the chance to take care of larger, better-paying herds without extra hired help. Costs only a few cents per day to operate: requires little attention.

All metal construction—time tested and proved

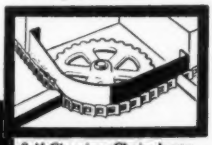
The Eagle Electric Barn Cleaner operates as a simple motor-driven conveyor system. Sturdy — all metal — time-tested and proved in all kinds of stall arrangements

Strong angle iron scrapers or flights of gutter width move litter to discharge pit where it is carried out of the barn by specially designed, leak-proof elevator and dumped automatically onto spreader. Cleans barn in a few minutes. Driving mechanism fully enclosed and recessed below floor Easily installed in any barn — new or old. If you have electric current, you can begin now to enjoy the time and drudgery-saving advantages and added profits of an Eagle Electric Barn Cleaner — write today for folder EF1248.



Specially Designed Leak Proof Adjustable Elevator

Recessed, Safe, Fully Enclosed and Protected Driving Mechanism.



Self-Cleaning Chain keeps free of litter and manure

THE EAGLE MANUFACTURING CO.
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MAKERS OF EAGLE SILO FILLERS, CROP BLOWERS
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Sunbeam **STEWART CLIPMASTER**

COOL, EASY-RUNNING ANIMAL CLIPPER

Clip your animals the fast, easy way with the new *electric* Clipmaster. It's the clipper with the quiet *30% more powerful,* air-cooled motor with *25% greater speed* inside the Easy-Grip handle. Has anti-friction tension control that assures perfect tension between blades and provides easy adjustment. $32.50 at your dealer's. Denver and West. $32.75. *Write for information on Sunbeam Stewart clipping equipment.*

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Dept. 30, 5600 W. Roosevelt Rd., Chicago 50, Ill.

FARM ELECTRICAL & MECHANICAL EQUIPMENT

1/2 H.P. CAP. MOTORS

(Brand New Not Gov't Surplus)

- Double 5/8" Shaft
- Sealed Ball Bearings
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- Overload Protected
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Guaranteed for one year for use on non-con't duty tool job. Rated 1 hour 55°C., 115 V., 60C., A.C., 1750 or 3450 R.P.M.

$35

300-GAL. HEAVY DUTY RECIRCULATING PUMP

For pools, cellars, evaporative coolers, bilges and 1001 other uses.

Supreme's outstanding heavy duty unit will deliver 300 gal. p.h. at no head and 60 gal. p.h. at 8 ft. head. Completely enclosed 1/30 HP 110-v 60-cycle motor with self-oiling long life feature. Non-corrosive shaft and bronze pump 10½" high, 8¾" I. P. T.

$19.50

GENERAL ELECTRIC & WESTINGHOUSE MOTORS

(Brand New Not Gov't Surplus)

HP	Volts	Type	Price
1/6	110	Split Phase	$11.95
1/6	110	Capacitor	17.50
1/4	110	Split Phase	12.50
1/4	110	Capacitor	19.50
1/3	110	Split Phase	15.50

TURNBUCKLES

(U.S. Surplus)

For guide ropes and wires and 1001 other uses. Steel and brass. Open 6", closed 9½".

5 for $1

PILOT LIGHT

(U.S. Surplus)

For boats, homes, camps, cyclists, emergencies. Complete with bulb and cell.

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Special Assortment of nuts, screws, bolts, rivets, gears, etc. 9 lbs.

$2

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(U.S. Surplus) Fences, posts, trees, ramps, bilges, etc. Complete 2 8-inch turnbuckles with 3/16" steel cable.

2 for $1

ALL EQUIPMENT BRAND NEW OR UNUSED SURPLUS

Cash or C.O.D. with 20% Deposit on all Orders

CANAL ELECTRIC CO., Dept. 12E, 310 Canal St., N.Y. 13, N.Y.

Clean Your Barn Electrically with the SANITARY BARN CLEANER

- ADAPTABLE TO ANY BARN
- NO PIT REQUIRED
- NO ENDLESS CHAIN
- SIMPLE TO INSTALL
- HIGHLY EFFICIENT
- LOW COST
- SAVES LABOR
- FULLY AUTOMATIC
- SAVES TIME

Write for free literature and prices

This sturdy barn cleaner saves hours of work each day.

Eau Claire Equipment Co. 513 North Michigan Street, Eau Claire, Wisconsin

HEATUBE DE-ICER

CAN'T BURN CATTLE

Keeps watering tanks open in coldest weather. Heating element is immersed below surface assuring safety and economy. Made entirely of copper for long life. No rust. Guaranteed one year.

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HEAT IS WELL BELOW THE WATER LINE

No. 7000 - 350 Watts	No. 8000 - 1000 Watts
For temperatures of zero and above. No thermostat.	For temperatures below zero. Includes thermostat.
INCLUDES EXCISE TAX $9.95	INCLUDES EXCISE TAX $12.95

10 FOOT - 3 LINE CORD & GROUND CLIP

INDUSTRIAL ELECTRIC MFG. CO.
130 HUBBARD STREET - ALLEGAN, MICH.

can be installed where a lamp is needed—or a radio, clock, night light, or cleaner could be plugged in.

A convenience outlet where you need it protects you from extension cords, always hazardous. Even when you're living in a rented house, the installation may be worth the cost. It's a safety premium for loved ones and household goods. If it is necessary to use extension cords, be sure they are covered with heavy rubber and have good firm connections.

Check your Christmas lights far enough in advance to allow time for needed repairs. No bare wires should be showing. Discard badly worn cords or those where sockets have twisted insulation off the wires.

Keep Tree Green

Because Christmas trees are cut early and held for shipment, they become dry and very combustible. If you can get a locally grown tree, you can cut it the day you want to decorate it. Natural moisture in the tree will make it more fire resistant than any chemicals that can be used. When a tree stands and dries after cutting, it gradually loses ability to draw up water.

If you buy a tree, cut off the end of the trunk diagonally at least an inch above the original cut and put it in water promptly. Keep the water level above the cut surface as long as the tree is in use.

Thawing Frozen Fruits

If you decide at the last hour that you want frozen peaches for dessert, it's possible. If the package is watertight, it can be thawed in cold running water in about 40 minutes. If you have an hour's grace, place it in front of an electric fan. But even if you have plenty of time, try serving peaches, frozen and sliced, with whipped cream. They're delicious.

Cooking Frozen Meats

Solidly frozen meats can be cooked successfully. You must lengthen cooking time 15 to 20 minutes per pound and cook at low temperatures.

4667
SIZES
34-50

9483
SIZES
11–17

Easy Patterns

4667—Attractive housefrock with princess lines and panels that end in utility pockets. Sizes 34-50. Size 36 takes 4⅛ yards 35 inch material.

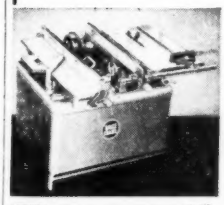
9483—Trim shirtfrock for winter fun. Has fitted bodice and waist, skirt has one seam. Jr. Miss sizes 11-17. Size 13 takes 3¾ yards 39 inch fabric. Initial transfer included.

Send TWENTY FIVE cents (in coins) for each pattern to: ELECTRICITY ON THE FARM, Pattern Department, Box 196, 243 W. 17th Street, New York 11, N. Y.

FIFTEEN cents more for the Fall and Winter Pattern Book . . . printed in the book is a free pattern.

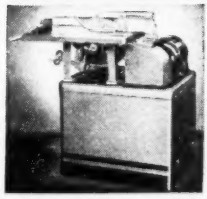
Save TIME, EFFORT and MONEY

in repairing and building your home, barn, chicken coops, pens, storage cabinets, cupboards, workbenches, feed bins, mangers, stanchions, chutes and wood parts of implements, wagons and truck bodies.



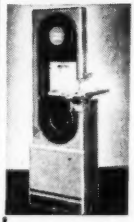
BOICE-CRANE No. 2529 SAW JOINTER

Only Boice-Crane makes this popular unit—a 10″ *tilting-arbor* saw and a 6-inch jointer, compactly combined on a steel cabinet stand, and driven by one motor. A complete workshop. Rips, cuts-off, miters, planes, rabbets, grooves, moulds.



BOICE-CRANE No. 2514 10″ TILTING-ARBOR SAW

The only 10″ tilting-arbor saw with optional low-cost motor or gas engine drive. Largest arbor and heaviest bearings of any 10″ saw.



BOICE-CRANE No. 2309 8-SPEED 14″ BAND SAW

Variable speeds for straight, contour, or bevel cutting of wood, metal and plastic. Accurate, smooth cuts. Handles work up to 8¾″ thick.

BOICE-CRANE No. 2208 HEAVY DUTY 24″ x 5″ JIG SAW

For fast, clean, accurate, vibrationless contour and straight cutting of metals, woods and plastics. Cuts up to 5″ thick. Oversize tilting work table.

FREE! *Write today for literature on the versatile, low cost sturdy, safety engineered line of*

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5 ft. $11.50
6 ft. 12.60
7 ft. 13.70

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STOP THAT WATER HAMMER $11.50

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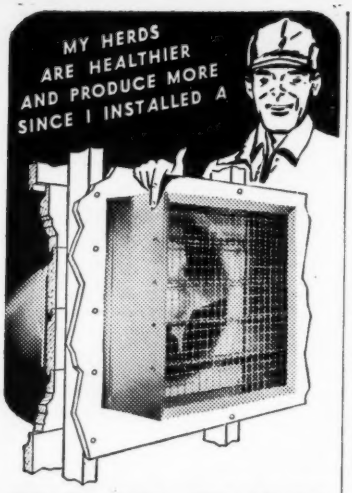

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Because...

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8-page booklet tells all about proper dairy barn ventilation. Fully illustrated with installation diagrams.

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East Moline, Ill., Dept. E-12

Gentlemen:

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Name (Please Print) _____

Town _____ State _____

County _____ R.F.D. _____

Questions and Answers

Converting Oil Stoves and Lamps

▶**Question:** *I have a good oil stove and would like to have it changed to electric. Would it be possible? It would be nice if the change could be made on lamps and other things, too.*

I. M. T., Kans.

▶**Answer:** We have investigated the possibility of changing an oil stove to electric. It could be done but the cost would be high and you would only have a make-shift electric range when you got through. It would be much more satisfactory to sell your oil stove and buy a new electric range. The heating elements, the switches, the fuses for protection and the wiring are the main parts of the electric range.

It is possible to make over oil lamps. Adapters are available so that sockets for electric lamps can be put in place of the oil burner. This is usually done only for ornamental purposes. The resulting lamps are usually not the best type to give light to see by.

Drive for Grist Mill

▶**Question:** *I have a 24 in. grist mill powered by a 7½ hp motor that runs at 1765 rpm. I have a 3½ in. pulley on motor and a 14 in. pulley on mill. This set-up runs the mill too fast, grinding my corn too fast. I have not had any previous experience with a grist mill, but I think if I had a 24 in. pulley on mill shaft, this would give better service. Please explain.* A. C. C., Va.

▶**Answer:** With the present pulleys on your motor and mill, and assum-

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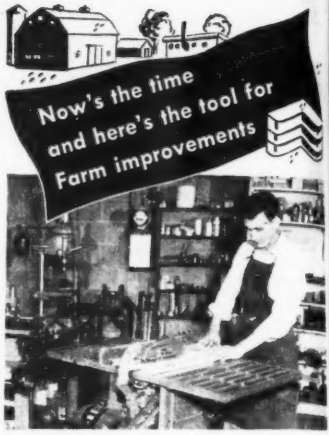
BOOMS WAGON UNLOADER
Get prices and particulars from
BOOMS SILO CO., Harbor Beach, Mich.



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Shelves, cupboards, and closets to make your home more livable . . . stalls, cribs, milk-houses, sheds to improve your property . . . whatever you need you can make this Winter with an Atlas to save you time on the sawing.

You'll find an Atlas saw one of the best investments you've ever made for saving money. Its big table (with extensions) is 45½" wide — with over 24" capacity between saw and fence and 12¾" surface ahead of blade. Blade tilts 45° — table always flat. Cuts 3¼" deep. Has quick-adjusting rip fence — precision ball bearings. An exceptional value at its low price. Like an extra hand for getting things done!

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FLEXIBLE, ELECTRIC **Thermotape**
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Saves TIME, LABOR, FUSS, EXPENSE.
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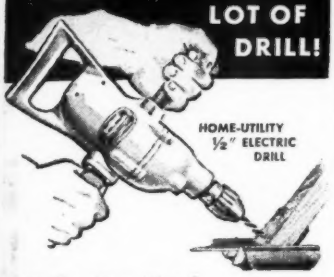
Give Him HOME-UTILITY Tools for Christmas!

$35.95 BUYS A LOT OF DRILL!



Built for Top-Notch Work in Building or Repairing

Take it from thousands of enthusiastic users, this husky Home-Utility ½" Electric Drill means better, faster drilling. And it will pay for itself in a short time, in time and money saved around your farm. With this handy Drill, you'll find it a lot easier to repair farm machinery, tools and harness; build truck and wagon bodies; install electrical, plumbing and heating fixtures. It's a great buy because: (1) it has extra capacity—up to ⅞" in hardwood; (2) it may be used as a portable Drill or a drill press, in a handy ½" Bench Stand (only $17.45); (3) it drives twist drills, augers, Hole Saws; (4) it's well-built by BLACK & DECKER, famous maker of quality electric tools for 38 years!

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ing you have no belt slippage, your mill should be running at about 440 rpm. If you substituted a 24" pulley for the 14" pulley, it would run at 258 rpm. If your grist mill has a 24" stone burr it would seem to me that both of these speeds would be too fast.

In burr mills with steel burrs, I have found that the fineness of grinding depends upon the setting of the burrs, the rate of feeding and the speed of the burrs. The best recommendation I could give you would be to find out from the manufacturer of the mill at what speed that particular mill should operate.

The length of the belt will not make much difference in your grinding except that if the belt is too short it will be inclined to slip, unless you use a belt tightener pulley. If a long flat belt is in the way of other operations, you could drive the mill very satisfactorily with shorter V belts and save space.

Selecting a Farm Freezer

▶**Question:** *I plan on buying a home freezer. Which is the best make for me to buy?*

First, I would like a front opening freezer, but have been told they are not as satisfactory as the chest type. Would you advise a front opening freezer that has drawers or extra doors to help keep the cold air in when opening the outer door, or isn't this necessary?

Which freezers are best, those that use coils around the outside or those that have partitions containing freezing coils?

Which insulation is best? What about the thickness of the box, does this have anything to do with keeping the freezer colder?

Also, the best freezing material that is used in the different freezers, such as freon, etc. How large a freezer do I need for a family of three? I wish to put meat, fruits and vegetables in it. Is a 11-12 cu ft box too large? O. W., Wis.

▶**Answer:** Buying a farm freezer is very much like buying a new automobile. There isn't any one which embodies all the good points or is better than all the rest. If there were, all the other companies would go out of business very shortly.

It is not possible to say that one insulating material is better than all others. It depends on how the materials are built into the boxes. Corkboard has been standard in refrigerators for many years. Fibreglass is a new one which has about the same insulating properties as cork. Other insulating ma-

2 How to solve PROBLEMS

PROBLEM 1 Chopping ice or building fires in winter to keep an ice-free drinking hole open for your stock *is* a problem! A General Electric Stock-tank De-icer will end your worries . . . automatically . . . unattended . . . at lowest cost. Plug it into regular 110-volt outlet, let it float in your tank, and forget it. The De-icer automatically keeps a drinking hole open for your stock, *even* in sub-zero weather.

PRICE $9.95*

PROBLEM 2 Winter is the time to bring all your broken metal equipment "up to snuff." A General Electric Farm Welder—approved by NEMA and power suppliers for farm use—will help you solve this problem. With a G-E Farm Welder, welding is easy to learn, simple to do. You can make new equipment or modify old machines, too, so they will suit your special needs.

WELDER, WITH ACCESSORIES, $139.50*

Your General Electric Farm Dealer has these products for you now. See him today!

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*Mfgr.'s Suggested Price.

GENERAL ELECTRIC
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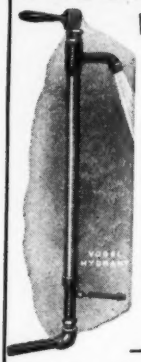
A VOGEL FROST-PROOF HYDRANT



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When Properly Installed

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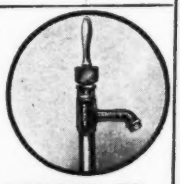
- ★ Reduces fire hazard.
- ★ Over a million Vogel Frost-Proof Closets and Hydrants have been sold.
- ★ *Write for literature on Frost-Proof Closets and Hydrants.*

When you see the handle in this position you know at a glance that the water is surely shut off.



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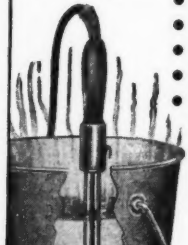

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GUARANTEED ONE YEAR

terials are also satisfactory if they are packaged in moisture vapor-tight packages, so moisture cannot condense in them.

The more insulation that is used the less power will be required and the longer the box will hold its temperature if the power should go off. The trouble with using eight or ten inches of insulation is that it costs money and it makes the boxes so big you cannot get them through a door. The top-opening boxes are also very awkward to get food into and out of if the walls are more than 5" thick. There is usually a compromise on insulation between first cost, cost of operation and convenience.

You can say the same thing about top-opening or front-opening boxes. Front-opening boxes are admittedly more convenient to use and to get food into and out of. They are also made of a size that will go through a door. The power consumption in general is a little more. The extra door inside of the main door, or drawer for food will help to save some of this power. There have been some difficulties with the frosting up of gaskets on the doors of front-opening cabinets. Cabinets that are well constructed, however, have overcome this difficulty.

If the coils are outside of the lining of the box it is usually a little easier to defrost and you have more storage space in the cabinet. If some of the coils are inside of the box in partitions, it enables one to use those partitions or shelves for freezing foods more quickly. By using coils or plates in this manner you can have a freezing compartment without having separate controls.

If you are like most users, you will find the first box you buy will be entirely too small. As you learn to use frozen products, you will put up more and more of them. I have known of families of five to use over one hundred cubic feet of storage space. Perhaps a fair estimate is about five cubic feet per person.

Freon is the common refrigerant in most freezers today. It is safe and effective.

Buy from a local dealer who can assure you that you will have service when you need it. It is also well to buy from a company in which you have confidence.

Protection for Fur Farm

▶**Question:** *We have about one acre enclosed by a guard fence containing a mink ranch. We should like to incorporate some inexpensive electrical equipment to serve as (1) deterrent to thieves, and or (2) burglar alarm.*

PEERLESS WaterKing

At the turn of a tap—275 to 860 G.P.Hr.
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GRIND YOUR OWN FEED WITH BELL'S NEW MODERN HAMMER-MILL

for as little as ¾ cent per hundred pounds. Cut Feeding costs 20% to 40% and always have freshly-ground Feed for your stock. Also for grinding Ear Corn, Soy Beans, Corn Cobs and roughages. Write for Special folder.

THE C. S. BELL CO., MFRS.
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Hammer-Mills - Corn Shellers
Feed Mixers

At present we have spot lights which we leave on all night. Can you recommend to us any such equipment and the names of suppliers? G. E. D., Conn.

▶**Answer:** Perhaps the best deterrent to thieves is good lighting.

There are two types of burglar alarms which you could use. The least expensive of these is the closed circuit alarm which is opened by someone bumping into a wire which may be concealed across windows and doorways, or attached to fence posts. If the wire is disturbed or if the electric circuit is cut an alarm bell connected to a battery would ring. Such an alarm circuit might also be connected through a relay to a floodlight on a different circuit so that the light would be turned on and the bell would ring if the alarm circuit was disturbed. These alarms are manufactured by the Lyon Rural Electric Company, Box 30, San Diego, Calif.; and Struthers-Dunn Co., Philadelphia, Pa. Tell the manufacturers just what you want if you write to them.

The other type of alarm is an electric eye system with beams entirely surrounding your pens. If a beam is interrupted an alarm would be sounded. These work on somewhat the same principle as electric door openers. They would be fairly expensive.

Greenhouse Controls for Nome, Alaska

▶**Question:** *I have some electrical problems in this far frozen north and I know that you can help me find the desired electrical controls.*

I have a glass house which gets too hot and I need an electrically controlled ventilator. Where can I buy such and how much?

Have a cool storage room built in my new house and want to hook up an electrical control that will keep this room just above freezing during the winter. I want to control the intake of warm air to this room. Where can I purchase such a thermostat?

L. I. H., Nome, Alaska

▶**Answer:** It is a pleasure to have a subscriber in Nome. Take a good breath of that Alaska air and a squint at the Northern Lights for me. Back in 1907-10 I spent three seasons surveying the boundary between Alaska and Canada. The memories are very happy ones.

Fenwal, Inc., 400 Pleasant Street, Ashland, Mass., make a variety of temperature controls. A type which would control the fan in your cool storage room would cost about $10.

The Minneapolis-Honeywell Regulator Company, 2709 Fourth Ave-

The ONE Water Heater for Every Farm Home:

Permaglas

TRADE MARK REG. U. S. PAT. OFF.

Its tank of glass-fused-to-steel CANNOT rust, CANNOT corrode under any water condition!

Because glass *won't* rust, you will never again be troubled with tank rust that ruins laundry, or corrosion dirt that discolors water and fixtures.

You always have abundant hot water... *all you need* for even the newest automatic kitchen and laundry appliances... always *hot*, always *clean*.

Permaglas Water Heaters are completely automatic, with the most modern features ever developed for hot-water convenience. They assure you a dependable supply of *clean* hot water. Economical, too!

A. O. SMITH Corporation, Water Heater Division: Kankakee, Ill. • International Division: Milwaukee 1
Licensee in Canada: John Inglis Co., Ltd.

Also SMITHway quality zinc-lined *Duraclad* Water Heaters, Farm Welders, and Vertical Turbine Pumps

Automatic electric water heaters in sizes for all needs.

REPLACEMENT OR REFUND OF MONEY ★ Guaranteed by Good Housekeeping NOT AS ADVERTISED THEREIN

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Saves soap, makes work easier, saves washing-wear on clothes. This free booklet explains how you can get it at very little cost. No obligation. Write for it.

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Just plug into any electric outlet and your Tokheim Compressor is ready to work for you. (Gasoline models also available.) Strong steel construction. Moderately priced. Thousands in use. General Products Division, Tokheim Oil Tank and Pump Co., 1622 Wabash Avenue, Fort Wayne 1, Indiana

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AUTOMATIC ELECTRIC THERMALINK WATER HEATING ELEMENT

$17.50 Slightly higher in some areas

Underwriters' Laboratory Approved

Your family, too, can enjoy the convenience of a modern automatic water heating system (in spite of a limited budget) now that the new THERMALINK Element is available at so low a cost. This remarkable electric water heating device can be easily screwed into the opening on the side of any standard thirty-gallon (or larger) domestic water tank or range boiler. If you already have a range boiler in your home, it can be converted into a modern water heating system with a THERMALINK Element. For an abundant supply of hot water the year 'round, without the tiresome task of building fires or tending a bucket-a-day, install a completely automatic THERMALINK Element.

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Please send me, without obligation, additional information and the name of the THERMALINK dealer nearest me.
NAME.....
ADDRESS.....
.....

nue, South, Minneapolis, Minn., makes all kinds of thermal controls. If you intend to use an electric fan to ventilate your glass house, either of the above companies could furnish suitable controls.

Mr. L. N. Roberson, 1540 East 102 Street, Seattle, Wash., has had much experience with glass house heating and temperature and humidity controls. I am quite sure he handles ventilators and control equipment, and possibly the type of thermostats you would need.

Switch With Pilot Light

▶**Question:** *Would like to know where I can get a Hubbell light switch for cellar with a signal light on just above switch.* E. B., Ill.

▶**Answer:** You should be able to buy a switch with a pilot light from any company selling wiring materials. They are made by practically all companies that build switches.

The Hubbell switch and pilot light is made by the Harvey & Hubbell Company, Bridgeport, Conn.

Pulleys for Grindstone

▶**Question:** *Will you tell me the size pulleys that I will have to use on my electric motor to correspond with a 16 in. pulley on the grindstone? I want to slow the speed down as the motor drives the grindstone too fast connected direct to the present pulley.* L. C. E., N. H.

▶**Answer:** The size pulleys you should use on your grindstone will depend on the diameter of the stone and the speed of the motor. Assuming the stone to be about 26" in diameter and the motor to run at 1725 rpm, you should use a 3" pulley on the motor driving a 16" pulley on a jackshaft. This jackshaft should have a 3" pulley driving a 16" pulley on your grindstone. That would give you a speed of about 60 revolutions per minute.

Yours without extra CHARGE!

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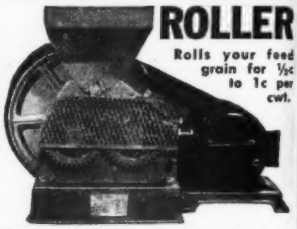

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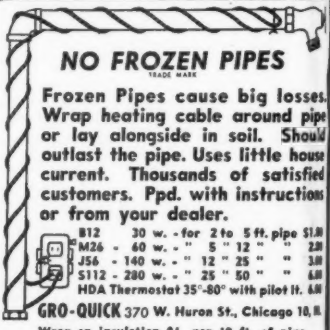

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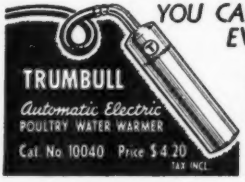
Wrap-on insulation $1. per 12 ft. of pipe.



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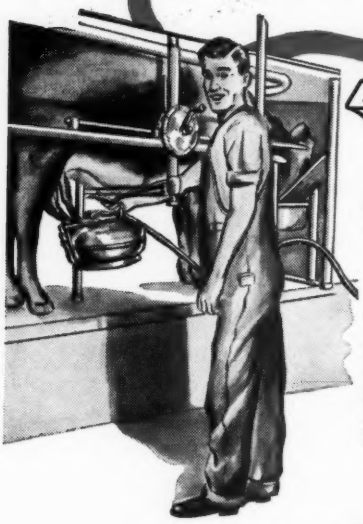

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